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國際學碩士學位論文

**The Interaction Effect of Corporate  
Governance and Trade Liberalization**  
**- Evidence from the Korea-U.S. FTA -**

기업지배구조와 무역 자유화가 기업 성과에 미치는  
상호작용 효과에 관한 연구: 韓美 FTA를 中心으로

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## **Abstract**

This thesis models the interaction between corporate governance and trade liberalization to examine how the interaction effect influences firm performance. The increase in world trade has outpaced world output and world GDP in recent decades, and scholars and policymakers alike are showing greater interest in the impact of trade liberalization on market structure. The removal of barriers to trade exposes firms to increased product market competition, but at the same time, freer trade also promotes growth opportunities by opening up foreign markets.

In this vein, this paper examines the macro-micro linkage of trade liberalization and firm performance by investigating how corporate governance enables firms to enhance those growth opportunities. The methodology benefits from exploiting a quasi-natural experiment, the enactment of the Korea-U.S. Free Trade Agreement, which provides plausible exogenous variations in trade shocks that mitigate simultaneity and endogeneity concerns. Furthermore, the study constructs its main corporate governance variable by exploiting the outside director system for publicly listed firms in Korea. Since the 1997-98 Asian financial crisis, Korean statutory law has mandated a minimum ratio of outside directors to board size for firms traded on the KOSPI and KOSDAQ indices. This standardization across firms enables a convenient setup which mitigates selection bias.

The findings from this study provide empirical evidence of the interaction effect between corporate governance and trade liberalization and its positive influence on firm performance. The main hypothesis, that firms with better corporate governance reap greater benefits from the expansion in trade opportunities, is supported by findings which are robust across many alternative specifications. Using a sample of publicly listed manufacturing firms in Korea from 2009 to 2014, this thesis finds that the interaction effect remains significant even when tested with different and complementary measures of independent and dependent variables in addition to an array of control variables.

**Keywords:** Corporate governance; free trade agreement; trade shocks; firm performance; Korean firms

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# **I. Introduction**

In the current era of global trade, trade liberalization is an unambiguously favorable shock for firms to grow through the expansion in export opportunities. While the macro-micro linkages of international trade and firm behavior have been investigated by scholars and policymakers alike, there has been relatively scant attention paid to the influence of corporate governance on firm outcomes from trade liberalization. Most of the analysis considering both corporate governance and trade liberalization has focused on how product market competition, which increases due to the removal of import barriers, acts as a governance mechanism (e.g. Giroud and Mueller 2010). A handful of studies have examined the reverse effect of how a firm's corporate governance influences its response to foreign competition (e.g. Guadalupe and Wulf 2010).

Evidence on how governance mechanisms enhance firms' abilities to benefit from an increase in trade opportunities remains the scarcest, even despite the growing consensus that corporate governance influences firms' ability to export (Minetti, Murro and Zhu 2015). Agency theory stipulates that corporate governance structures influence a firm's strategic decisions; it is therefore plausible that corporate governance enhances a firm's ability to take advantage of the increase in growth opportunities from exports. In fact, the influence of corporate governance on firm export propensity is well-documented in both developed and emerging markets (Lu, Xu and Liu 2009). However, corporate governance is rarely examined in tandem with growth opportunities from trade

liberalization, even though the removal of trade barriers increases the likelihood that firms will participate in the export market. As a case in point, Baldwin and Gu (2004) found that after the Canada-U.S. Free Trade Agreement was enacted, Canadian manufacturing plants, even those which previously did not export, were more likely to export to the U.S.

This thesis addresses the gap in extant literature. It provides empirical evidence on the interaction effect between corporate governance and trade liberalization and its positive influence on firm performance. The main hypothesis, that firms with better corporate governance reap greater benefits from the expansion in trade opportunities, is supported by findings which are robust across many alternative specifications. Using a sample of publicly listed manufacturing firms in Korea from 2009 to 2014, this thesis finds that the interaction effect remains significant even when tested with different and complementary measures of independent and dependent variables in addition to an array of control variables.

The methodological rigor of this study comes from exploiting a quasi-natural experiment: the enactment of the Korea-United States Free Trade Agreement (KORUS FTA) in 2012. The KORUS FTA, which immediately eliminated 82% of U.S. and 80% of Korean tariff duties after it was entered into effect<sup>1</sup>, presents a trade shock which is exogenous to firm corporate governance and other firm-level variables. Thus, it provides

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<sup>1</sup> These figures represent only the percentage of goods for which tariffs were immediately removed; the provisions of the FTA actually eliminate 95% of each nation's tariffs on goods within five years.

plausible exogenous variations in trade opportunities that mitigate simultaneity and endogeneity concerns. Since the pre-FTA tariffs varied widely across industries, there are measurable cross-sectional variations in both growth opportunity and product market competition. Moreover, Korea's exports in goods to the U.S. soared after the FTA and its trade surplus in goods doubled<sup>2</sup>. [Figure 1] illustrates how Korea's exports to the U.S. have been on the rise while imports from the U.S. faced a steady decline. This provides an empirical setting where Korean exports significantly outpace U.S. imports. Thus, this study utilizes a setting in which the improvement in trade opportunities for Korean firms is plausible and observable, since the removal of import tariff barriers did not lead to an influx of American goods hindering such opportunities.

Additionally, the study constructs its main corporate governance variable by exploiting the outside director system for publicly listed firms in Korea. Since the 1997-98 Asian financial crisis, Korean statutory law has mandated a minimum ratio of outside directors to board size for firms traded on the KOSPI and KOSDAQ indices. In status quo, firms with asset sizes of more than 2 trillion won must maintain at least a 50% ratio of outside directors to total number of board members, while firms with asset sizes below 2 trillion won are required to have at least 25%. This standardization across firms establishes a convenient setup which mitigates extraneous factors and selection bias. [Figure 2] illustrates the steady increase in the percentage of outside directors on the

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<sup>2</sup> Korea's trade surplus in goods with the U.S. increased from \$14.7 billion in 2011 (the last year before the FTA was enacted) to \$26.6 billion in 2014.

board for publicly listed firms in Korea. Furthermore, the wealth of evidence on the positive influence of outside directors on firm performance in Korea strengthens the assumption for the main corporate governance variable in this study. Choi, Park and Yoo (2007) found that outside directors instituted after the Asian financial crisis had a significantly positive effect on firm performance; this finding in the Korean setting marks an interesting departure from similar studies done in other settings which produced negligible results (e.g. Hermalin and Weisbach 1991, Mehran 1995, Kesner 1987).

This thesis begins by exploring how the removal of tariff barriers affects operating performance. The ratio of outside directors is coded as a dummy variable, and for firms with an outside director ratio that is above the mandated minimum, the dummy is interacted with a variable which measures the reduction in export tariffs. Firm fixed effects are included to control for time invariant differences in corporate governance and export-related competition. The baseline model shows that on average, ROA increased for the firms in the sample. The ratio of outside directors and the reduction in tariffs from the FTA each had an independent positive influence on ROA. When combined, the interaction between outside directorship ratio and lower export tariffs was also positive and statistically significant. The results also remain robust even when the drops in import tariffs and the subsequent increase in foreign competition are considered.

This study then examines whether the results show variations depending on firm and industry heterogeneity. Extant literature has found a causal link between trade liberalization and firm productivity (e.g. Topalova and Khandelwal 2011, Hu and Liu



2014)<sup>3</sup>, and firm productivity is known to be correlated with firm age and firm size (e.g. Haltiwanger, Lane and Spletzer 1999, Aw, Chen and Roberts 2001, Van Biesebroeck 2005). Following in the lines of inquiry of previous studies which find that trade liberalization induces market share reallocation, thereby leading to productivity gains (Pavcnick 2002, Melitz 2003, Chevassus-Lozza, Gaigné and Le Mener 2013), this thesis theorizes that better corporate governance and a subsequent increase in trade opportunities will produce the most benefits for firms with the highest levels of productivity and firms which have survived past the first stage of development. Consistent with this notion, the empirical results show that when trade opportunities increase, better corporate governance amplifies the positive impact especially for larger firms, older firms, and firms with higher productivity. Additionally, the results remain positive and significant when controlling for industry competitiveness and reliance on external capital.

Further robustness checks are conducted by addressing potential methodological concerns. It is possible that the magnitude of the reduction in tariffs was correlated with industry characteristics in the pre-FTA period, and thus the model captures inherent industry characteristics instead of the change in trade opportunities. To

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<sup>3</sup> Topalova and Khandelwal (2011) observed that the bi-directional changes in tariffs as a result of trade liberalization improved productivity for Indian firms. The changes in export tariffs improved competitiveness of final goods while the changes in import tariffs generated greater access to inputs for such goods. In similar vein, Hu and Liu (2014) also found that export tariff reduction and import tariff reduction independently impact productivity for Chinese manufacturing firms. Interestingly, their findings show that export tariff reduction decreased productivity while import tariff reduction had an enhancing effect.

mitigate this concern, control variables are employed to include and test for relevant industry characteristics. Also, the the Herfindahl-Hirschman Index (HHI) is included to control for industry market structure, and HHI is interacted with the outside directorship ratio in similar fashion to Giroud and Mueller (2010), who interacted HHI and a governance variable<sup>4</sup> to examine corporate governance in competitive industries. Finally, this study adopts alternative measures for governance, namely institutional ownership and foreign ownership, and for performance, namely Tobin's q and stock returns. The results remain positive and significant.

The following section presents the analytical framework, hypotheses, and literature review are discussed, followed by a description of the statistical specification, data sources, variable construction, and definitions. The empirical results are then presented along with robustness checks, and the thesis concludes with a discussion of the implications and limitations of the findings.

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<sup>4</sup> Giroud and Mueller (2010) exploit the passage of 30 business combination laws, which reduce the threat of a hostile takeover, between 1981 and 1991 as an exogenous variation in corporate governance.

## **II. Theory and Hypotheses**

This section proceeds as follows. First, a comprehensive literature review examines extant literature related to the topic of this thesis. Past studies have investigated the impact of corporate governance on firm performance and the impact of trade liberalization on market structure – and therefore trade opportunities, as well as product market competition – as independent phenomena. Following the summaries of extant work on each line of inquiry is a review of the small but significant body of literature pertaining to the combination of corporate governance and trade liberalization as variables of interest.

Afterwards, the unique facts of the empirical context of this study are elaborated in greater detail through a review of Korea's corporate governance reforms and mandatory outside directorship law, followed by a summary of relevant facts about the KORUS FTA. Finally, the section concludes by elucidating the theoretical constructs for hypothesis formulation.

### **2.1. Literature Review**

#### **2.1.1. Corporate governance and firm performance**

The simplest explanation of corporate governance defines it as a system which balances the different needs of a firm's stakeholders and controls internal and external corporate structures to alleviate the age-old agency problem between owners and

managers (Shleifer and Vishny 1997). Corporate disciplinary mechanisms can be categorized into internal corporate governance, which can be carried out by the board of directors, auditors, controlling shareholders, and other actors who directly monitor managers – as stipulated in the classical ‘theory of the firm’ (Jensen and Meckling 1976, Fama 1980) – or external corporate governance, which encompasses securities analysts, the labor market for managers, the market for corporate control, anti-takeover measures, and the like (Cremers and Nair 2005). There is a deterrence effect at micro- and macro-levels of the firm as managers and firms both face the threat of exits and are thus discouraged from incurring agency costs, thereby improving firm performance. In addition, stringent corporate governance and monitoring encourages higher firm valuation since potential investors and other actors in the market perceive less risk.

A considerable body of work supports that corporate governance – both internal and external – and firm value are positively linked in developed markets (e.g. Gompers, Ishii and Metrick 2003, Bruno and Claessens 2010). The large literature on corporate governance in emerging markets has likewise generated a positive correlation. Single-country studies concerning firms in countries such as India (e.g. Black and Khanna 2007), Russia (e.g. Black 2001, Black, Love and Rachofsky 2006), China (e.g. Mohamed, Zhou and Amin 2016) have supported the hypothesis that good corporate governance exerts a positive influence on firm market value. Cross-country studies (e.g. Klapper and Love 2004, Anderson and Gupta 2009) present similar findings, albeit with some variations resulting from country-level differences. A prominent example is the study done by Black, de Carvalho and Gorga (2012), which examined corporate governance in Brazil

and compared the results with findings from Russia, India and Korea, ultimately suggesting that firm governance practices as a whole predict higher firm performance but also pointing out that country characteristics affect which specific practices can predict firm market value and which firms have such an association.

In Korea, the setting of this thesis, a multitude of empirical evidence supports that governance mechanisms have a positive and significant association with firm performance (Baek, Kang and Park 2004, Black, Jang and Kim 2006, Choi, Park and Yoo 2007), even when the concept of corporate governance was virtually unknown in the pre-1997 Asian Financial Crisis period (Joh 2003). Interestingly, this relationship is especially pronounced for governance variables related to board characteristics (e.g. Black, Jang and Kim 2006, Choi, Park and Yoo 2007, Black and Kim 2012). However, Black et al. (2015) point out that most of extant literature concerning corporate governance and firm value suffers from deficiencies in time series data, thereby making firm fixed effects infeasible and creating an overreliance on OLS regressions. A lack of fixed effects gives rise to the potential for unobserved firm-level factors to confound the results. Thus, a minor objective of this thesis is to perform an additional check on the relationship between governance and firm performance with the inclusion of firm fixed effects for control for time invariant differences in corporate governance. Overall, there is strong support in extant literature of the causal link between corporate governance and firm performance.

Within the corporate governance literature, board composition and shareholder orientation have been explored frequently because of ample empirical evidence showing

that such monitoring mechanisms can determine whether a firm can acquire necessary finances and other important resources as well as access to information (e.g. Allen and Gale 1999). In particular, outside directors have received special attention from academics, corporations and policymakers alike because of their critical role as independent members of the board of directors. Although external stakeholders such as institutional investors also monitor firms, for example through proxy voting, and ultimately influence firm performance (e.g. Lee 2015), outside directors on the board can exert direct influence on firm investment decisions and other performance related-factors (Jensen and Meckling 1976). According to the theory of the firm, outside directors are best able to fulfill monitoring functions in the firm because of their independence from management and their incentive to maintain their reputation as experts (Fama 1980, Kaplan and Reishus 1990). Aside from their monitoring role, outside directors also contribute to firm performance by providing valuable insight and experience based on their own expertise (McDonald, Westphal and Graebner 2008) as well as that of their network ties, such as through board interlocks (Mizruchi 1996).

Beyond the ivory tower, the topic of independent outside directors has been an important focus of corporate governance reforms in many countries as of late<sup>5</sup>. For these reasons, the ratio of outside directors to board size – since it can be reasonably assumed that a higher ratio of outside directors is correlated with better monitoring functions –

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<sup>5</sup> In extant literature, the corporate governance structures of Germany and Japan, especially with regard to independent outside directors, are often compared with that of the U.S., and to a lesser extent, the U.K.

can serve as a reliable measure of corporate governance which influences firm performance. As the forthcoming subsections will show, the ratio of outside directors is a significant variable in the Korean setting due to unique specifications of the mandatory outside directorship law.

### **2.1.2. Trade liberalization and market structure**

For FTAs, trade liberalization is bilateral, but the impact of trade liberalization on growth opportunities – resulting from the reduction in export tariffs, thereby removing barriers to export to overseas markets – has not been investigated as extensively as the comparable effect on product market competition, the latter of which results from intensified foreign competition due to the removal of import barriers. The influence of trade liberalization on growth is somewhat controversial because so far there has been greater attention paid to the tendency for imports to increase over exports, creating trade deficits. For instance, in most of the studies which examine the 1989 Canada-U.S. Free Trade Agreement, the findings showed that competition intensified for U.S. firms because of the rise in imports from Canada (e.g. Munirathinam, Marchant and Reed 1997, Clausing 2001, Head and Ries 2001).

However, the findings from those studies also indirectly supported the hypothesis that Canadian firms benefitted from enhanced growth opportunities due to trade liberalization. While it would be fallacious to claim that trade liberalization is a zero-sum game, it follows logically that if countries engage in a trade pact and one partner faces increased competition from an influx of imports, then another partner may be benefitting due to increased growth opportunities from exporting more goods. This is

not to say that there will always be winners and losers in free trade. For instance, developing countries which opened up to international trade and unilaterally reduced tariffs and other trade barriers – China being a prominent example – enjoyed tremendous economic growth while their trading partners also benefitted from greater access to foreign inputs (see, e.g., Bas 2012 for empirical evidence of this assertion). In addition, the OECD (2011) estimates that halving the trade barriers among G20 economies would induce significant job growth, higher real wages, and increased exports.

Despite this, previous research on the growth opportunities from trade liberalization gives conflicting results (e.g. Santos-Paulino 2002, Dutta and Ahmed 2004, Narayan and Smyth 2005, Ratnaik 2012). Pacheco-López (2005) attempted to isolate the outcomes of the North American Free Trade Agreement (NAFTA) on the balance of trade in Mexico and concluded that while trade reforms during the mid-1980s influenced imports and exports, the NAFTA itself had a negligible effect on exports. On the other hand, the cointegration analysis in Ahmed (2000) produces robust data to support that trade liberalization in Bangladesh improved the country's export performance. Nonetheless, multilateral economic initiatives such as the Trans-Pacific Partnership – which holds the distinction of being the largest trade agreement in history (Nakamura 2016) – being negotiated by some of the most powerful economies in the world, there is a salient need to empirically investigate how trade liberalization impacts growth opportunities, not only at the macroeconomic level, but also at the microeconomic level.

Trade liberalization has also been found to affect export decisions for firms, as illustrated by studies examining the removal of trade barriers and firm entry into the



export market (Melitz 2003, Bernard and Jensen 2004, Bas 2012, Chevassus-Lozza, Gaigné and Le Mener 2013). In general, there are two interconnected mechanisms that enable trade liberalization to influence firms to enter the export market. The first is dependent on the assertion that without trade liberalization, only the most productive plants – which are capable of overcoming trade barriers – participate in the export market. When all tariff barriers fall, then even firms that did not previously export can now begin exporting, and the export market becomes bigger. In their study of Canadian manufacturing plants, Baldwin and Gu (2004) found empirical evidence of this exact phenomena; that is, free trade between Canada and the U.S. encouraged previously non-exporting firms to enter the export market, leading to a significant increase in the number of exporter plants. The second is related to the removal of import tariffs, which subsequently reduces the costs of inputs and therefore makes exporting final goods or services produced with those inputs an attractive option for firms. This is supported by Amiti and Konings (2007), who studied Indonesian manufacturing plants over a 10-year period and concluded that the largest productivity gains from trade liberalization result from the reduction of input tariffs. This finding is also consistent with the first assertion that more productive firms are more likely to export.

### **2.1.3. Corporate governance and trade liberalization**

Corporate governance and trade liberalization have been studied in tandem through the lens of increased product market competition. In relevant literature, studies have consistently found that the positive influence of better corporate governance on firm performance is dampened by greater product market competition (e.g. Chou et al.

2011, Giroud and Mueller 2011). For outcomes on firm productivity, competition and corporate governance were found to be complements since firms experienced higher productivity growth when intense market competition was prevalent and when tight ownership control was exercised (e.g. Januszewski, Köke and Winter 2002<sup>6</sup>). In addition, product market competition itself can affect internal corporate governance. In their study of Korean firms, Byun, Lee and Park (2012) found that product market competition improves internal governance mechanisms; moreover, the effectiveness of the board of directors was a critical factor which affected how the interaction of product market competition and corporate governance influenced firm performance. This further supports previous studies which highlight the importance of the board of directors for corporate governance in Korea.

The findings in extant literature can draw the general conclusion that corporate governance and product market competition can be substitutes if competition serves as an external disciplining mechanism or complements if they interact to influence firm outcomes. This thesis asserts that a similar logic holds for growth opportunities from trade liberalization, but with a twist. When export barriers are removed, firms may be incentivized to improve corporate governance for various reasons, such as tapping into the expertise of outside directors who have relevant trade-related experience, or attempting to improve corporate transparency to increase the likelihood of securing

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<sup>6</sup> Although this particular study did not measure product market competition resulting directly from trade liberalization, it utilized HHI and similar firm-level and industry-level characteristics to this thesis.

external financing to expand operations. Ultimately, firms with better corporate governance are better positioned to benefit from the trade opportunities following the reduction of export tariffs, and will have better performance as a result. This is elaborated further in later sections.

## **2.2. The Case of Korea**

The empirical setting of this study provides many advantages to examining the proposed interaction because of Korea's unique history of corporate governance regulation as well as exposure to the international market. While corporate governance in Korea is often criticized, described by unflattering phenomena such as the 'Korea Discount'<sup>7</sup>, there are a plethora of studies which find a positive correlation between corporate governance mechanisms and operating performance. In particular, outside directors in Korea have been found to have a significant and positive effect (e.g. Black, Jang and Kim 2006, Choi Park and Yoo 2007) in contrast to the insignificant associations found for studies set in other countries (e.g. Hermalin and Weisbach 1991, Mehran 1995, Kesner 1987).

Furthermore, the impact of increased trade opportunities is amplified in the Korean setting due to the country's export-based economy – as it is the world's fifth

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<sup>7</sup> The forward price-earnings ratio for Korea is much lower than those of its counterparts in advanced economies. This is often termed the 'Korea Discount' and the undervaluation of Korean stocks is attributed to low corporate transparency and poor corporate governance of Korean firms.

largest export economy<sup>8</sup> – and its competitiveness in the global market. According to the Observatory of Economic Complexity (2016), Korea has an Economic Complexity Index of 1.82, making it the sixth most complex country in the world according to the Economic Complexity Index; also, Korea has a revealed comparative advantage in 249 product categories<sup>9</sup>. These figures indicate that Korea's exports to the world are far larger than would be expected from an economy and country of its size. Therefore, the removal of export barriers represents a tremendous growth opportunity for the Korean economy and consequently for Korean firms.

### **2.2.1. Korea's Corporate Governance**

To understand why Korean companies are statutorily required to have a certain ratio of outside directors to board size, it is important to note that Korea's corporate governance structure is different from those of comparable economies due largely in part to the country's unique growth trajectory. Scholars have coined terms such as 'compressed modernity' (Chang 1999) and 'rush-to development' (Han 1998) to characterize the explosive speed with which Korea underwent industrialization. During a period when economic growth took precedence over all else, corporate governance measures and regulations took a back seat. Low profitability persisted but capital continued to flow into unprofitable projects, and outrageously high debt-equity ratios for conglomerates were a testament to the fact that financial institutions were not performing

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<sup>8</sup> The figure comes from data in 2015 according to the Observatory of Economic Complexity.

<sup>9</sup> The figures come from data in 2015 according to the Observatory of Economic Complexity.

proper monitoring functions (Joh 2004). Eventually, the 1997 Asian Financial Crisis toppled the unstable foundations which the Korean economy was built upon, and it soon became apparent that the national foreign debt could not be repaid without assistance.

At this point, the International Monetary Fund (IMF) stepped in and ordered the Korean financial sector to undergo large-scale restructuring in exchange for a (now-controversial) aid package. [Table 1] summarizes the reforms demanded by the IMF. There is a virtually universal consensus among scholars that corporate governance failure was one of the main causes of the financial crisis (e.g. Johnson et al. 2000, Joh 2004), and it was amidst this backdrop that mandatory outside directors for listed companies were implemented in Korea a year after the currency crisis. Independent directors were expected to improve corporate governance for Korean firms since family ownership and disproportionate control of large conglomerates often gave rise to principal-principal problems in addition to traditional principal-agent problems (La Porta, Lopez-De-Silanes and Shleifer 1999). The government enforced stricter regulation of the qualifications of outside directors to ensure that they were unaffiliated and independent actors.

By 1999, all Korean listed firms were obligated to have a board of directors with a minimum of 25% outside directors, and large firms with assets exceeding 2 trillion won were required to have a 50% outside directorship ratio. Despite its shortcomings, the mandatory outside directorship ratio has contributed to increasing corporate transparency and most importantly, improving monitoring functions of the board of directors (Chun 2016). Understandably, an overwhelming majority of studies which

examine the contribution of outside directors to firm performance or utilize outside directors as a proxy for corporate governance have conducted empirical analyses by exploiting the implementation of the mandatory outside director system in 1998 as an exogenous shock (see, e.g., Baek, Kang and Park 2004, Cho and Kim 2007, Choi, Park and Yoo 2007, Black and Kim 2012). It is worth noting that in general, even though there is a positive significant relationship between outside directors and firm performance, the magnitude of the impact is weak.

Nonetheless, the board of directors is an important governance variable in the Korean setting. Black and Kim (2008) found empirical evidence to support that board structure reforms led to higher profitability for firms, and Black et al. (2015) constructed a comprehensive corporate governance index of Korean firms and found that the positive influence of variables in the index on firm market value are principally driven by board structure. Moreover, this result was strengthened when the 1999 regulatory shock mandating a 50% outside directorship ratio for large firms was instrumented for board structure.

### **2.2.2. The Korea-U.S. FTA**

Although the trade growth between the U.S. and Korea has been overshadowed in recent years by soaring trade with China, which is now Korea's leading trade partner, the Korea-U.S. bilateral economic relationship remains one of the most important partnerships. The U.S. is second only to China as the top destination for Korean exports, and as early as 2005, South Korea superseded France and Italy to become the 7<sup>th</sup> largest trading partner as well as a major destination for agricultural exports from the U.S.

(United States Census Bureau 2017). The balance of trade, as well as the direction of imports and exports, began shifting dramatically as the Korean economy developed. In the years since the KORUS FTA was passed, there have been numerous indicators that Korea's exports have become more competitive in the international market and particularly in the U.S. market.

In 2016, Korea was the 7<sup>th</sup> largest goods export market for the U.S. but also the 6<sup>th</sup> largest supplier of imports (Office of the United States Trade Representative 2017a). During the first four years of the KORUS FTA<sup>10</sup>, the Korean trade surplus with the U.S. increased by 115% (United States Census Bureau 2017). While Korean exports to the U.S. increased substantially after the passage of the FTA, U.S. exports to Korea decreased substantially<sup>11</sup>. Although other trade agreements such as the NAFTA also led to major hikes in the U.S. trade deficit because of import growth outpacing export growth, in that case, the volume of U.S. exports to its trade partners remained the same. In comparison, the KORUS FTA was followed by a 9% decrease in U.S. exports of goods to Korea; even sectors which traditionally heavily to Korea were not exempt, as there was a 45.4% surge in Korean agricultural exports to the U.S. and a 5.4% decline in U.S. agricultural exports to the U.S. (Office of the United States Trade Representative 2017a).

Moreover, the tremendous growth in Korea's goods trade surplus is even more surprising given that the U.S. faced a 5% decrease in its trade deficit with the world

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<sup>10</sup> The increase is calculated using the year before the KORUS FTA took effect and comparing it to the fourth year after implementation.

<sup>11</sup> The average monthly exports to Korea fell for 11 out of 15 sectors which usually export to Korea. The figures are relative to the volume of exports in the year before the FTA.

during the same post-FTA period. Korean exports to the U.S. increased by 19%, or roughly \$11.5 billion, during a time when U.S. goods imports from the rest of the world decreased by 6%<sup>12</sup> (United States Census Bureau 2017). Overall, these figures indicate that Korean firms have indeed been benefiting greatly from the removal of tariff barriers. [Figure 3] illustrates the distribution of Korea's top ten industries with the highest trade surpluses. These categories, which are all in the manufacturing sector, represent 94.7% of South Korea's overall product-category surplus.

### **2.3. Hypotheses Formulation**

Heterogenous firms are bound to have varied responses to trade shocks from tariff reduction, and extant literature has examined characteristics which affect such responses. Since trade globalization is bi-directional, it presents both opportunities and constraints depending on the circumstances – for instance, abolishing import barriers may intensify product market competition but also represent growth through greater access to inputs while the reduction of partner countries' trade barriers generates more opportunities through exports.

This thesis argues that both of these effects – the increase in product market competition as well as the generation of growth opportunities – can have a positive influence on firm performance. First, the removal of tariffs pushes firms that face greater

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<sup>12</sup> The increase is calculated using the year before the KORUS FTA took effect and comparing it to the fourth year after implementation.



import competition in the domestic market to become exporters and capitalize on the growth opportunities. Second, as tariffs are reduced, the costs of production in the home country may fall; such is likely the case in Korea, where numerous industries depend on inputs from U.S. imports. Therefore, even the fall in import tariffs for Korea can generate higher firm performance for Korean firms, even those which do not necessarily participate in the export market. In line with previous literature elucidating the impact of outside directors and overall corporate governance structure on firms' ability to exploit new opportunities (e.g. Minetti, Murro and Zhu 2015), the main hypothesis, then, seeks to examine whether the interaction of firms' corporate governance and the increase in export opportunities *together* affect performance and facilitate value-maximizing behavior.

***Hypothesis 1a: There is a positive association between corporate governance and firm performance.***

***Hypothesis 1b: There is a positive association between an increase in trade opportunities and firm performance.***

***Hypothesis 1c: Firms with better corporate governance have a stronger positive association between trade opportunities and firm performance than firms with worse corporate governance.***

The interaction of corporate governance and competition has been established in extant literature. Giroud and Mueller (2009) utilized the exogenous variations from the passage of business combination laws in the United States, which weakened corporate governance, to investigate whether the impact on operating performance was

different for firms in competitive versus noncompetitive industries. They found that competition mitigates agency problems, and thus, the worsening of corporate governance negatively affected performance in competitive industries but did not significantly impact firms in non-competitive industries. This is in line with what classical economists such as Hicks (1935) call the ‘quiet life’ hypothesis, which stipulates that managers of firms in non-competitive industries are more prone to managerial slack. Applying this to the context of this study, it is possible to formulate a hypothesis about the impact of corporate governance on firms’ response to the increase in foreign competition resulting from the reduction in import tariffs.

***Hypothesis 2: Firms with better corporate governance have a weaker negative association between foreign competition and firm performance than firms with worse corporate governance.***

Furthermore, firm heterogeneity is likely to induce variations in firms’ exposure to the FTA. Among these characteristics, productivity is an important consideration. Melitz (2003) suggests that high-productivity firms are more likely to benefit from trade liberalization because low-productivity firms are negatively affected by the increase in foreign trade. Hence, firm productivity is likely to impact the association between firm performance and trade opportunities. Additionally, research in corporate finance has proposed that high-productivity firms are *ex ante* more likely to have better corporate governance mechanisms (Maksimovic and Phillips 2001). In relation to productivity, firm size and firm age are also important, albeit indirect, measures of financial constraints since capital market imperfections are more likely to

negatively affect smaller and younger firms (Almeida et al. 2004). Therefore, it is expected that larger and older firms will show greater propensity for the interaction of corporate governance and trade opportunity. Also, a direct measure of firm productivity, total factor productivity (TFP), is hypothesized to have a parallel effect, i.e. more productive firms will benefit more from the interaction of the ratio of outside directors and the reduction of export tariffs.

***Hypothesis 3a: Larger and older firms will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than smaller and younger firms.***

***Hypothesis 3b: Firms that are more productive will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than less productive firms.***

Industry-level characteristics are also likely to affect the results. Access to external finance becomes salient because the FTA may intensify competition or growth opportunity; in either case, firms would want to ensure that they have the resources to face the changes. Corporate governance becomes an important consideration in this regard, since corporate governance quality can moderate access to external capital (Jensen and Meckling 1976). Manova (2008) examined mechanisms through which credit constraints affected trade and found that weak financial institutions could hamper international trade flows since exporters would have restricted access to external capital. Taken together, the empirical literature suggests that corporate governance is most

important for firms in industries with high capital demands to respond to the dual competitive pressures of increased foreign competition and increased trade opportunity.

***Hypothesis 4: Firms in industries with greater dependence on external finance will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than firms in industries that with less dependence on external finance.***

Additionally, the competitiveness of the industry is likely to be affected by the trade shock, thereby affecting the outcome. There are significant variations in the competitiveness of different Korean and U.S. industries, making generalization difficult without empirical proof. It is plausible, however, that the greatest opportunities for growth through trade were levied upon Korean industries which were more competitive than their U.S. counterparts since more competitive industries would be better equipped to handle a simultaneous increase in competition from imports and increase in opportunities to export. In line with protectionist arguments against trade, the U.S. would have placed the highest tariffs on industries which are less competitive (which would mean that Korean products are more competitive in those industries). While the reduction of tariffs can make less competitive firms more competitive, it is more likely that firms operating in industries which were *ex ante* more competitive would benefit from increased trade opportunities.

***Hypothesis 5: Firms in industries that are more competitive relative to their counterparts in the U.S. will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance***

*than firms in industries that are less competitive relative to their counterparts in the U.S.*

### **III. Data and Methods**

#### **3.1 Data Sample and Sources**

The sampling frame was constructed using the TS2000 database of the Korea Listed Companies Association (KLCA), which provides comprehensive financial and nonfinancial data for publicly listed firms on the KOSPI and KOSDAQ indices in Korea. This study restricts its analysis to firms in the manufacturing sector<sup>13</sup>, excluding motor vehicles<sup>14</sup>, for the six-year period of 2009-2014. There are several reasons for limiting the sample to manufacturing firms and excluding the motor vehicle industry group. First, it is necessary to set all post-FTA tariffs to zero because as Guadalupe and Wulf (2010) point out, phase-out schedules for tariff removal create endogeneity problems. In KORUS, the tariff elimination schedule for manufactured goods is relatively straightforward and does not contain as many sensitive items<sup>15</sup> as those for agricultural goods or services. However, since passenger vehicles have a phase-out schedule (from

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<sup>13</sup> In the KSIC, the manufacturing sector includes industries with a two-digit KSIC code from 10 to 33. Industry-specific data is measured at the four-digit and five-digit KSIC levels in this study. This is explained further in future sections.

<sup>14</sup> This study excludes firms in the motor vehicle industry group (four-digit HS code 3703 and two-digit KSIC code 30).

<sup>15</sup> Korea has numerous protections for its agricultural sector, and correspondingly, agriculture was the most sensitive sector in FTA negotiations. Passenger vehicles were the most sensitive item for manufactured goods and had numerous provisions for safety and environmental standards which could complicate the data.

8% to 4% and then zero after five years, which extends beyond the period of this study), excluding this industry group would improve the accuracy of the estimates. Second, the U.S. trade deficit in goods with Korea more than doubled in the years after KORUS came into effect, so it makes sense to exclude the services sector and focus on the industries that experienced the highest growth in trade opportunities (Office of the United States Trade Representative 2017b)<sup>16</sup>. Moreover, the top export categories for Korean goods to the U.S. were in the manufacturing sector<sup>17</sup>. However, although Korean auto exports to the U.S. increased, U.S. auto exports to Korea increased by 208% from 2011 to 2015 (Office of the United States Representative 2017a). The extraordinary increase in foreign competition due to influx of U.S. auto imports would affect the data to measure growth in trade opportunity for firms in related industries. Third, some of the variables utilized in the estimations are only available for manufacturing industries.

After omitting firms with missing variables or insufficient data, the final sample consists of 581 firms in 23 two-digit KSIC sectors and 4,996 firm-year observations. Data sources for firm, governance and industry variables come from the KCLA, the Korea Exchange (KRX), the DART repository of corporate filings system of the Financial Supervisory Service (FSS), the FnGuide database, the KIS-Value database, and Statistics Korea.

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<sup>16</sup> According to the 2017 Trade Policy Agenda Report, the U.S. trade deficit in goods was \$27.6 billion in 2016, up from \$13.2 billion in 2011. In contrast, the U.S. services trade surplus with Korea trade has increased significantly after KORUS (\$10.7 billion in 2016).

<sup>17</sup> According to the same aforementioned source, the top import categories in 2016 were vehicles, electrical machinery, pharmaceuticals, and mineral fuels.

## **3.2. Variable Construction**

### **3.2.1. Trade variables**

The main treatment in the specification comes from an exogenous measure: tariff reduction. Specifically, the change in export tariffs from the pre-FTA period (2009 to 2011) to zero (2012 to 2014) measures the growth of trade opportunity for the industry. Industries with higher pre-FTA tariffs experienced the biggest changes, and thereby had the greatest increases to trade opportunity. This approach follows the methodological precedents of previous studies which utilized tariff reduction as a measure for growth opportunities and product market competition resulting from trade liberalization (see Tong and Wei 2014, Guadalupe and Wulf 2010). All sector-specific tariff data is from the World Integrated Trade Solution (WITS) database of the World Bank, with supplementary data from the Tariff Analysis Online tool of the World Bank. Additional data on imports and exports comes from the UN Comtrade database. Products in these databases use the six-digit Harmonized System (HS) identification, which is the maximum level of disaggregation available. The maximum level of disaggregation for Korean firms is categorized by the five-digit Korean Standard Classification (KSIC) code, which is roughly equivalent to the four-digit U.S. SIC code (Caves and Bailey 1992). A matching process ensured that the data was consolidated at the five-digit KSIC level.

The KORUS FTA also eased the entry of U.S. goods into the Korean market. Thus, to account for the bilateral nature of KORUS, the change in foreign competition

is also calculated using the reduction in import tariffs (with data coming from the same source). Additionally, this study controls for the existing domestic concentration, since the level of competition in the target industry affects Korean firms' ability to take advantage of the export opportunities. The Herfindahl-Hirschman Index (HHI) is commonly employed as a measure of competition in empirical literature<sup>18</sup>, and many studies have used HHI as a main variable (see Giroud and Mueller 2011, Byun, Lee and Park 2012). The HHI data in this study is based on the four-digit KSIC level and sourced from Statistics Korea.

### **3.2.2. Governance variables**

The ratio of outside directors, coded as a dummy variable, is used as the main measure for firm-level corporate governance. For publicly listed firms, Korea strictly mandates the ratio of outside directors to board size. Firms with a book asset value above 2 trillion won are legally required to have a board of directors comprised of at least 50% outside directors, while firms with a book asset value less than 2 trillion won are required to have a ratio of outside directors to board size of 25%. This regulation was put into place after the Asian financial crisis with the intention of improving the monitoring functions of independent directors (Chun 2016). The minimum threshold set by Korea's statutory company law can be exploited to take advantage of the variations that occur when certain firms have outside directorship ratios which exceed the required minimum.

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<sup>18</sup> Moreover, the HHI is also well-grounded in theory, making it a reliable measure of domestic concentration.



Also, scholars such as Choi, Park and Yoo (2007) have empirically proven that independent directors positively influence firm performance in Korea. This thesis assigns a dummy variable to the outside directorship ratio, coding 1 for firms with ratios that exceed the minimum (50% or 25%, depending on the firm's asset size), and 0 otherwise.

As a robustness check, this study employs institutional ownership concentration as an alternative measure of corporate governance. Additionally, foreign ownership concentration is tested as another alternative measure. In the aftermath of the Asian financial crisis, foreign equity ownership was no longer restricted, and thus foreign investors became an external governance mechanism (Choi, Park and Yoo 2007).

### **3.2.3. Firm and industry variables**

Firm performance is measured by the return on assets (ROA), which is a common variable employed in empirical literature and serves as the main dependent variable in this study. Two alternative measures of firm performance, Tobin's Q and stock returns, are also tested. Other firm-level variables include firm asset size (dummy variable, coded as 1 if the firm asset size is above the median for firms within the same two-digit KSIC industry and 0 if otherwise), the natural log of firm age, and firm productivity (dummy variable, coded as 1 if the firm's total factor productivity is greater than the median for firms within the same two-digit KSIC industry and 0 if otherwise).

Industry-level variables are also considered in the estimation model. In the baseline model, the industry average of the ROA (at the five-digit KSIC level) is calculated with the firm in question being excluded. Additionally, the competitiveness

of the Korean industry *relative* to the equivalent industry in the U.S. are considered. If Korean goods were competitive against U.S. goods in a particular industry, then the positive effect of the trade shock would be more pronounced since the Korean goods would become even more competitive due to the removal of export tariffs.

Firm-level and industry-level variables, their specific roles, and the method of calculation are explained further in the methodology section. [Table 2] summarizes the variables employed in this study.

### **3.3. Empirical Strategy and Methodology**

This study employs two unique facets of the empirical setting to utilize difference-in-difference combined with a natural experiment. First, the methodology employs the ratio of outside directors to board size as the main measure of corporate governance. After the Asian financial crisis revealed the devastating of Korean firms' (virtually nonexistent) corporate governance mechanisms, Korea enacted its company statutory law mandating a specific minimum ratio of outside directors for publicly listed firms. This exogenous shock to corporate governance has been employed by many empirical studies (see, e.g., Baek, Kang and Park 2004, Cho and Kim 2007, Choi, Park and Yoo 2007, Black et al. 2015). A common finding of these studies is the positive correlation between the ratio of outside directors and firm performance, even if the magnitude is rather weak. Following this logic, this thesis asserts that firms which voluntarily comply beyond the mandated minimum ratio show greater concern for corporate governance and are not merely performing decoupled 'symbolic' actions

(Westphal and Zajac 1998). Since all listed firms are still required to have outside directors, the minimum ratio of outside directors can act as a ‘fixed effect’. Based on these ratios, there is a clear distinction between firms with ‘good’ corporate governance and those with ‘worse’ corporate governance. To supplement the findings, this study also utilizes alternative measures of governance.

Secondly, this study exploits the KORUS FTA as an exogenous shock in trade opportunities. The FTA removed existing tariff barriers between the U.S. and Korea. Since the trade duties varied across different industries, then it is possible to quantify how the FTA influenced trade opportunity for Korean firms by utilizing each industry’s duties on exports to the U.S. in the pre-FTA period. This thesis theorizes that industries with higher export tariffs will experience a greater growth shock. Clausing (2001) and Guadalupe and Wulf (2010) provide evidence of the opposite effect, i.e. that industries with higher import tariffs experience a greater competitive shock. Because trade opportunity and managerial incentives (i.e. corporate governance) are jointly determined as part of the industry equilibrium, it is difficult to establish an empirical relationship between governance and growth opportunity in this respect. This paper mitigates the challenges from this concern by exploiting an exogenous variation in the magnitude of trade opportunity.

There are several advantages to the proposed methodologies. First of all, there is potential for omitted factor bias if the main variables, corporate governance and trade opportunity, are represented solely on their cross-sectional measures since unobservable factors such as industry productivity could influence firms’ ability to take advantage of

trade opportunities. This thesis eliminates this concern by utilizing a trade shock, the KORUS FTA, in lieu of attempting to control for all potentially omitted variables.

Second, there could be an endogeneity bias if corporate governance influences firm strategy in the product market. In industries where corporate governance is important for firm performance, growth opportunities could improve endogenously if firms implement managerial incentives to induce better firm performance. In response to such incentives, managers could become more competitive and seek out growth opportunities from trade in order to improve performance. Thus, trade opportunity could be a response to corporate governance and its interaction with corporate governance would have little empirical value. The approach utilized in this thesis evades the endogeneity problem by using export tariffs, which are decided at the level of the world economy and cannot be immediately affected by corporate governance mechanisms of individual firms.

Overall, this study directly confronts several methodological issues. The rich data on Korean firms together with the immediate cut in tariffs from the FTA enable the use of a panel data approach with firm fixed effects. Black et al. (2015) warned that the absence of fixed effects would give rise to the potential for unobserved firm-level factors, so the principal regressions include firm fixed effects. While firm fixed effects address time-invariant factors, an array of control variables address time-varying factors and year dummies are also included to further address variations over time that is common to all firms.

The following section explains the methodologies in greater detail.

### 3.3.1. Baseline Model

First, a simple univariate regression tested the impact of the ratio of outside directors on ROA by classifying firms according to the dummy variable (i.e. firms with the minimum ratio of outside directors and firms with a higher ratio of outside directors) and utilizing pre-FTA and post-FTA three-year average ROA. The findings showed that firms with a minimum outside directorship ratio had, on average, a 3.4%<sup>19</sup> greater drop in ROA compared to compared to firms with higher outside directorship ratios. This finding suggests that outside directorship ratios impacted how firms heterogeneously responded to the FTA. This evidence is generalized in the following regression:

$$ROA_{ijkt} = \beta_1 ExpTar_{jt} + \beta_2 ImpTar_{jt} + \beta_3 ODRatio_{kt} + \beta_4 ODRatio_{kt} * ExpTar_{jt} + \gamma' X_{ijkt} + \alpha_j + \alpha_t + \varepsilon_{ijkt}$$

where  $i$  indexes firms,  $j$  indexes industry (five-digit KSIC),  $k$  indexes corporate governance (according to dummy), and  $t$  indexes time.  $ROA_{ijkt}$ , the return on assets, is the dependent variable which measures firm performance. To capture the change in the level of tariffs (and thereby in the levels of growth opportunity and foreign market competition),  $ExpTar_{jt}$  measures the average tariffs on Korean exports to the U.S. for industry  $j$  in year  $t$ , and is interacted with a dummy that is equal to 0 after 2012. Likewise,

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<sup>19</sup>  $t = 2.1$

$ImpTar_{jt}$  measures the average level of tariffs on imports from the U.S. in industry  $j$ , interacted with the same dummy. The coefficient of  $ExpTar_{jt}$ ,  $\beta_1$ , measures how ROA was affected by the increase in trade opportunities. It is expected that  $\beta_1$  will be positive, and more so for firms that with higher ratios of outside directors.

$ODRatio_{kt}$  is a dummy variable which equals 1 if the ratio of outside directors exceeds the minimum and 0 if otherwise.  $\beta_2$  is also expected to be positive, since better corporate governance is expected to lead to better firm performance.  $ODRatio_{kt} * ExpTar_{jt}$  is the interaction term which measures how the increase in trade opportunity from the reduction in export tariffs varies as a function of corporate governance. In line with the main hypotheses that firms with better corporate governance perform better after a positive growth shock,  $\beta_4$  is expected to be positive. The null hypotheses for  $\beta_4$  (i.e.  $\beta_4 = 0$ ) is that the expansion of trade opportunity uniformly affects all firms regardless of corporate governance.,  $\alpha_f$  is firm fixed effects and  $\alpha_t$  is year fixed effects.  $X_{fst}$  is the vector of controls (firm characteristics: size, the natural log of age, and one year lagged HHI) and  $\varepsilon_{fst}$  is the error term. Standard errors are clustered at the five-digit KSIC industry level.

### 3.3.2. Firm and industry characteristics

To account for firm and industry heterogeneity, this thesis also explores whether firm-level and industry-level characteristics affect the results. First, *firm asset size* and *firm age* are indirect measures of firm-level productivity and financial constraints because capital market imperfections are more likely to negatively impact

smaller and younger firms, which are consequently less likely to be productive (Almeida et al. 2004). Firms are therefore classified according to size (i.e. below or above the industry median in 2011), and regressions are estimated separately.

Second, *firm productivity* explores whether more productive firms benefitted more greatly from trade liberalization. According to Melitz (2003), high-productivity firms are better able to maximize the gains from trade opportunities while low-productivity firms are vulnerable to the negative effects of trade liberalization. Since firm age and firm performance serve as indirect measures of productivity, firm-level total factor productivity (TFP) is employed as a direct measure. The sample is divided according to comparative TFP in 2011, the year before the passage of the KORUS FTA, and separate regressions are estimated.

Third, *relative industry competitiveness* is measured to determine whether competitiveness of industries influenced the impact of the trade shock on firms. This thesis hypothesizes that Korean industries which were more competitive than their U.S. counterparts would experience greater opportunities for growth following trade liberalization. The competitiveness of the industry is measured by the difference between import and export tariffs, following the logic that a Korean industry with low import tariffs for U.S. goods and high export tariffs would be more competitive, since the tariff schedule would imply that Korean goods do not need any protection since they are competitive against U.S. goods in the same industry. Again, separate regressions are estimated for each subsample, divided by whether the difference between pre-FTA export and import tariffs for a Korean industry is negative or positive.

### 3.3.3. Alternative measures

This study employs an arsenal of alternative measures for dependent and independent variables to further test the robustness of results and strengthen its conclusions. First, *institutional ownership* serves as another proxy for corporate governance. Institutional investors serve as corporate monitors, and their role in corporate governance is widely recognized in management literature. Correspondingly, institutional ownership has often been utilized as a proxy for the quality of corporate governance across a wide range of studies. As with the main corporate governance variable, the ratio of outside directors, the relationship between institutional ownership and performance is well-documented in literature (see, e.g., Johnson and Greening 1999, Cornet et al. 2007).

Second, *foreign ownership* is tested as another alternative measure of corporate governance. Foreign investment is a governance mechanism because firms may be encouraged to adopt the sophisticated standards of good corporate governance that foreign owners may have. Foreign owners are also more likely to be completely independent, thereby representing the ultimate group of outsiders, and they could bring with them knowledge of international trade and management practices which could benefit the firm's export strategy. For example, Fernandez and Nieto (2006) found that FDI facilitates exports by Chinese firms. Due to the nature of this variable (as there are firms with no foreign ownership), it is coded as a dummy. Thus, in this model, firms with no foreign investors are assumed to have worse governance.



Third, two alternative dependent variables, *Tobin's q* and *stock returns* are tested as an additional robustness check. Aside from the fact that these are often utilized as measures of firm performance in empirical studies, Duchin, Matsusaka and Ozbas (2010) measured the impact of outside directors on ROA, the log of Tobin's q (which is computed so that the estimation regression coefficients have a percentage interpretation) and stock returns, and found comparable results across all three.

## IV. Results

### 4.1. Main Specification

The results for the main specification are illustrated in [Table 3]. In Columns (1) and (2), the outside directorship dummy and the variable measuring the reduction in export tariffs are included to test Hypotheses 1a and 1b, with Column (2) adding the control for industry HHI. In Columns (3) to (6), the main interaction effect is included to test Hypothesis 1c. To account for the bilateral nature of the FTA and test Hypothesis 2, Column (5) also considers the reduction in import tariffs and Column (6) interacts this variable with outside directorship. Controls for industry HHI are added to Columns (4) to (6).

Consistent with Hypotheses 1a, 1b, and 1c, there is indeed an interaction effect between corporate governance and trade liberalization which positively affects firm performance. The statistical findings of [Table 3] show that the impact of the ratio of outside directors on firm performance is positive and statistically significant, as is the coefficient of the reduction in export tariffs. The coefficient of the interaction term is positive and statistically significant at 1%, thereby supporting the hypothesis that better corporate governance amplifies the positive impact of trade opportunities for firms. The coefficient remains positive and statistically significant even when the reduction in import tariffs is introduced, but the interaction term did not produce a statistically significant result. Therefore, Hypothesis 2 is not supported. However, this result is

meaningful nonetheless, since it shows that the findings are driven by the reduction in export tariffs rather than the increase in foreign market competition from U.S. goods. All findings are still positive and statistically significant after controlling for industry HHI.

Overall, firms with better corporate governance had better operating performance resulting from an increase in trade opportunities after the reduction of export tariffs. However, corporate governance did not affect firms' abilities to respond to product market competition in this study.

## **4.2. Firm Characteristics**

[Table 4] illustrates how firm characteristics affected the estimates. Columns (1) and (2) classify firms according to size (above or below median in the sample in 2011), and Columns (3) and (4) classify firms according to the number of years they have been listed (above or below median in the sample in 2011). The results show that for smaller firms, the impact of outside directors is close to zero and insignificant. By contrast, for larger firms, corporate governance had positive and significant effect on ROA. The coefficient of the interaction term is positive and significant for both small and large firms, but the magnitude of the coefficient is much greater for the subsample of large firms. These results are parallel for younger and older firms. Thus, Hypothesis 3a is supported. Interestingly, the impact of export tariffs on performance is significant only for smaller firms.

Columns (5) and (6) classify firms according to total factor productivity (TFP).

Again, the interaction term is positive and significant for both subsamples, and the magnitude is much larger – in this case, the coefficient for high TFP firms is more than double that of low TFP firms. These results indicate that the vulnerability of lower productivity firms to increases in foreign competition hampers the ability for those firms to benefit from trade liberalization. Therefore, Hypothesis 3b is supported.

### **4.3. Industry Characteristics**

[Table 5] summarizes how industry characteristics influence the estimates. Regressions were calculated separately for subsamples classified by industry characteristics. Columns (1) and (2) separate firms based on the industry's net change in capital. The results indicate that the positive effect on operating firms was mainly concentrated among firms with higher quality corporate governance in industries with lower dependence on external finance. However, the interaction between corporate governance and trade opportunities was not significant for firms operating in industries with high capital intensity. This finding suggests that firms which are reliant on external finance are unable to reap the benefits of trade liberalization, consistent with Manova (2008). Thus, Hypothesis 4 is only partially supported.

Columns (3) and (4) include the competitiveness of industries in order to explore whether industries that are more competitive relative to their counterparts in the U.S. experienced a greater positive effect from the trade shock. The findings showed that the interaction coefficient is significant for both less competitive and more competitive

industries, and the magnitude is greater for more competitive industries; thus, Hypothesis 5 is supported. Notably, the positive impact of outside directors is only significant for firms which operate in less competitive industries. This suggests that corporate governance is more important for firms in industries which are not as competitive as their counterparts.

#### **4.4. Alternative Measures**

[Table 6] shows the results for two alternative measures of corporate governance, institutional ownership and foreign ownership. As shown in Column (1), there is a positive and significant relationship between firm performance and ownership by institutional investors. However, the percentage of ownership held by foreigners did not have an independent positive effect on ROA. In support of the main hypothesis, the interaction between institutional ownership and trade opportunity is positive and statistically significant. Interestingly, although foreign ownership by itself did not affect firm performance, the interaction between foreign ownership and the reduction in export tariffs has a statistically significant influence on ROA. This suggests that firms with foreign ownership are possibly more likely to expand to global markets and therefore maximize the opportunities from the removal of export tariffs.

[Table 7] shows that for two alternative measures of firm performance, Tobin's q and stock returns. As expected, the results are comparable and parallel to the results on the main dependent variable, ROA, although the magnitude is considerably less in the

case of stock returns. This is consistent with the trend of generally low stock returns reported for Korean firms, i.e. the 'Korea Discount'.

## **V. Discussion**

In extant work, researchers have invariably highlighted the positive impact of corporate governance on firm performance and the opportunities for growth for firms after the removal of trade barriers. In the body of research where these two variables overlap, the vast majority of the focus has been on the nexus of corporate governance and competition. Building on agency theory and the view that trade liberalization increases firms' export propensity and, this study has developed a theoretical framework that integrates the role of corporate governance in enhancing the benefits of trade liberalizations at the firm level.

Based on a sample of 581 firms across 23 industries, the results of this study indicate support for the theoretical predictions. Specifically, the estimation model found that Korean manufacturing firms on average enjoyed better firm performance after the reduction of export tariffs, and that better corporate governance enhanced this influence. Contrary to expectation, the reduction of import tariffs did not have a significant effect on firm performance, and neither did the interaction. Upon closer inspection, this result makes sense considering that many Korean manufacturers use U.S. imports of raw materials and other goods in their production processes. Therefore, even though there was presumably an increase in foreign competition, the benefit of reduced costs of productions dwarfed the potentially negative effects of intensified product market competition. Rather than competing with U.S. imports in the domestic market, it seems

more likely that Korean manufacturers enjoyed lower costs for materials from the U.S., which in turn improved the profitability of their export goods.

These results align with the reality of the KORUS FTA, in which the rapid increase of Korean exports in goods to the U.S. occurred simultaneously with an actual decrease in U.S. goods exports to Korea. Additionally, the results also reflect the Korean economy's export-orientated nature. The findings suggest that Korean firms did, in fact, take advantage of the growth in trade opportunities by joining the export market, and consistent with established theory on how trade liberalization induces even non-exporters to expand their operations.

Moreover, the findings were robust across firm-level and industry-level variables as well as alternative measures of corporate governance and firm performance. This suggests that the interaction effect of corporate governance and trade liberalization is especially relevant for firms in export-heavy sectors, such as manufacturing. [Table 8] summarizes the results for the hypotheses.

## **5.1. Contributions to Literature**

This study investigated how an increase in trade opportunities affects firms' performance depending on the firm's corporate governance. The empirical approach was based on two policies implemented in Korea: the mandatory ratio of outside directors to board size and the passage of the Korea-U.S. FTA. The KORUS FTA increased competitive pressures by increasing foreign competition, but as the results show, the



increase in trade opportunities from the reduction in export tariffs turned out to have a greater and more significant effect on firm performance. This is consistent with the Korean economy's characterization as an export-oriented model. The bilateral nature of the FTA was considered by including both the cut in import tariffs and the cut in export tariffs in the empirical model, which adopted a combination of difference-in-difference models together with the observation that some firms opted to have outside directorship ratios that went beyond the minimum.

Whereas nearly all prior research on corporate governance in Korea has focused on the post-Asian financial crisis era to exploit the exogenous shock from the new regulation on outside directorship as a natural experiment, this study shows that the role of outside directors is relevant nearly two decades later. Although the outside directorship system in Korea has received heavy criticism for being largely symbolic in nature, the results of this study reinforce the findings from extant literature that adding outside directors to the board improves firm performance, especially during times of high growth opportunities from trade.

Firm characteristics were also found to influence the outcomes of the estimates. Corporate governance was not found to affect smaller and younger firms, but when interacted with the increase in trade opportunities, the effect on firm performance was statistically significant across both characteristics. This enriches the extant literature by suggesting that in the context of smaller and younger firms, outside directors moderate the positive effects of the reduction of export tariffs. The effect of outside directors on smaller and younger firms can be explained by the likelihood of more concentrated

ownership (and less institutional ownership) for firms which are still in the early stages of development, but as the findings show, corporate governance matters for firms to take advantage of trade opportunities. In similar vein, higher productivity firms experienced a stronger interaction effect, but the interaction was also significant for lower productivity firms. This implies that amidst greater opportunities to participate in the export market, lower-productivity firms with better corporate governance mechanisms are able to improve productivity to maximize exporting gains.

The results depending on industry characteristics yielded some interesting findings. For firms with a high reliance on external finance, the interaction effect was not significant, making this the only case where the main result was not robust. One explanation for this outcome is that the need to raise external finance intensifies after competition increases. As the statistically significant association between the ratio of outside directors and firm performance in both classifications confirms, corporate governance enhances the capacity to attract such external finance. However, in industries with higher capital intensity, it is possible that the reliance on external finance impedes the ability to maximize trade opportunities, and this is not alleviated by better corporate governance. On the other hand, competitiveness of industry had expected results, namely that firms in industries which were more competitive to their U.S. counterparts benefited the most from the interaction effect. The statistically significant coefficient for less competitive firms also indicates that the removal of tariffs would have made such firms more competitive than before and induce them to become improve their operations. This is enhanced, once again, by better corporate governance.

Evidence from the alternative estimation also confirmed the main hypothesis. Institutional investors also serve a monitoring function for corporate governance, and their role is unique because there is a propensity to liquidate investments rather than exercise appraisal rights or vote against the management. Since the Asian financial crisis, institutional investors in Korea have shown stronger interest in corporate governance and begun to reflect the global trend of shareholder activism. This has been influenced in part by the influx of foreign investors, and the empirical findings confirm that even different corporate governance mechanisms can amplify the positive effect of trade opportunities. In particular, foreign ownership as a corporate governance variable was only significant when interacted with trade liberalization.

## **5.2. Limitations and Suggestions**

Despite the methodological rigor of this study, there are several limitations. First of all, corporate governance is inherently endogenous. Reverse causality for the corporate governance – firm performance link remains an issue, as it is possible that better performing, more efficient, and more productive firms were the most likely to increase their ratio of outside directors beyond the mandated minimum. In the case of Korea, the true impact of corporate governance has remained somewhat ambiguous; while empirical literature finds a positive link to firm performance, the pervasiveness of the ‘Korea Discount’ and other criticisms of corporate transparency point to fundamental weaknesses in Korea’s corporate governance structure. This study addressed this

concern by utilizing institutional ownership and foreign ownership as alternative measures, and future work may benefit from employing other variables such as CEO equity ownership. Additionally, regulations on corporate governance mechanisms should be exploited as endogenous shocks. For example, the recent law banning new cross-shareholdings among chaebols<sup>20</sup> may yield significant findings in the future. Another line of inquiry could be related to principal-principal problems, which are especially prominent for Korean firms.

Secondly, although the KORUS FTA was indeed economically significant for both the Korean and the U.S. economies, it was negotiated over the course of five years. The anticipation of the KORUS FTA enactment may have influenced the results and violated the parallel trends hypotheses that would validate the findings. Future studies may want to incorporate a placebo policy which assumes that the FTA was already expected in 2005, since negotiations were first publicly announce in early 2006. A placebo test for each year between negotiations and enactment (2006 to 2012) could also help decrease the likelihood of omitted variable bias.

Moreover, there is a possibility that another large-scale exogenous trade shock – the enactment of the EU-Korea Free Trade Agreement<sup>21</sup> in 2011 – may have

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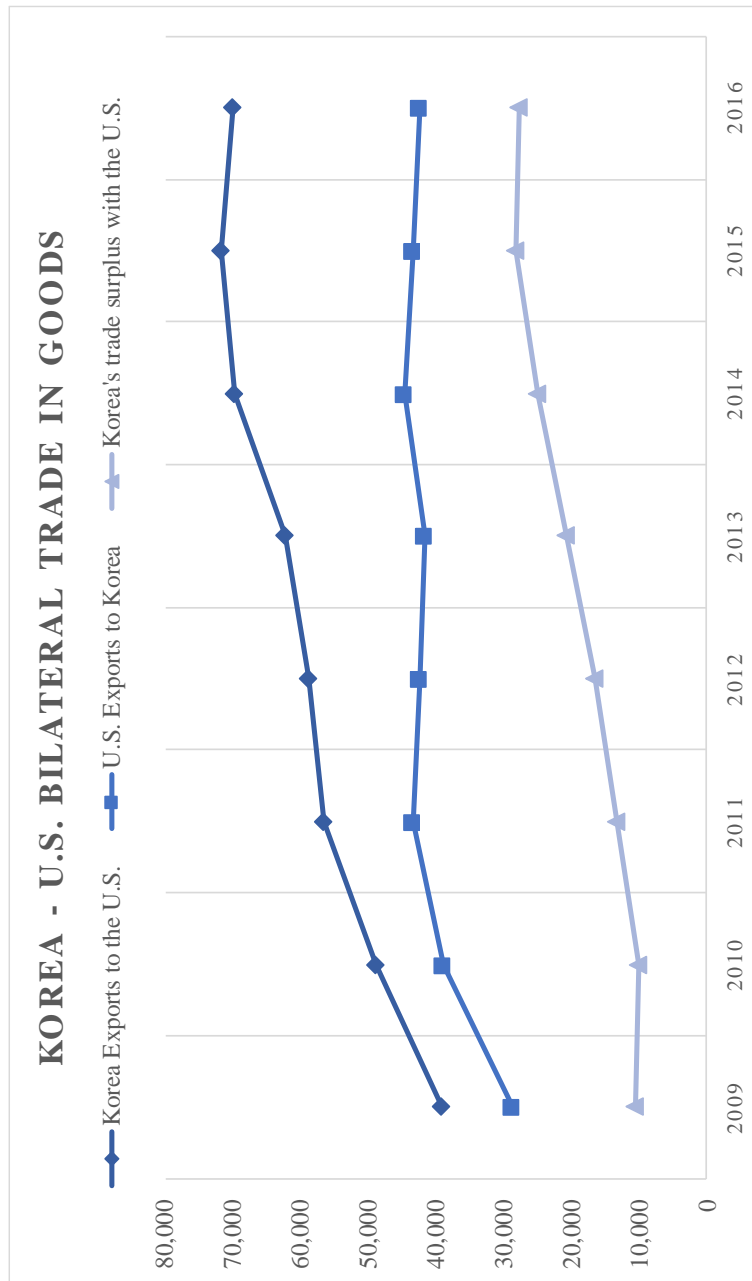
<sup>20</sup> In 2014, the new cross-shareholding ban in Korea took effect. Although the new regulation effectively banned newly issued cross-shareholding arrangements without explicit bans on existing ones, many chaebols have already begun to eradicate circular investments and shift to a holding company system.

<sup>21</sup> In 2011, the EU-KOREA FTA came into effect. By 2016, it had increased trade between the two partners by 55%, and South Korea rose to become one of the EU's top ten export markets. For example, European car sales in Korea have tripled since the FTA was enacted.

confounded the results, given the breadth of both trade agreements as well as the similar timing. This study did not control for the EU-Korea FTA. However, the EU-Korea FTA significantly increased European exports to Korea and induced a trade surplus; thus, trade liberalization in this context would have increased product market competition rather than the opportunities for growth through trade. Hence, the findings from this thesis are meaningful on their own, but future research agendas may want to control for other FTAs, or possibly even consider multiple trade agreements simultaneously for a more comprehensive study of the impact of trade liberalization on market structure.

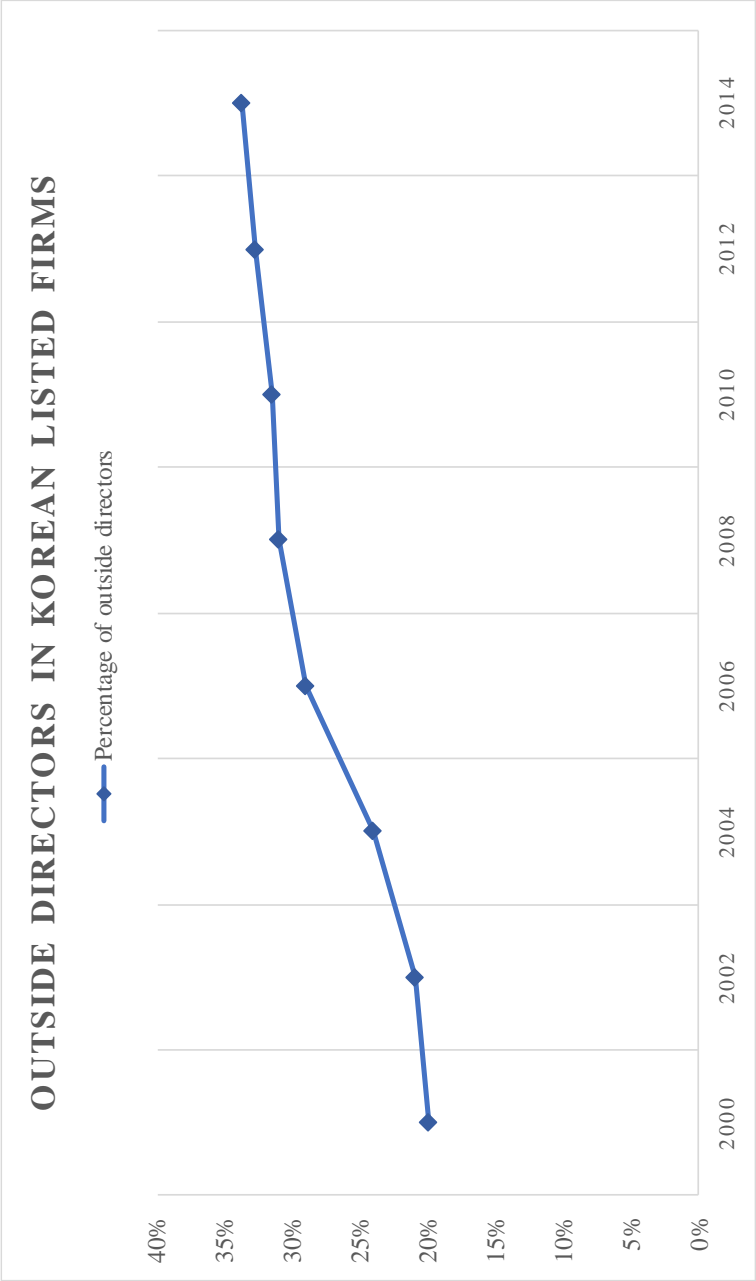
## Figures and Tables

[Figure 1: Korean Exports to U.S. vs. U.S. Exports to Korea]



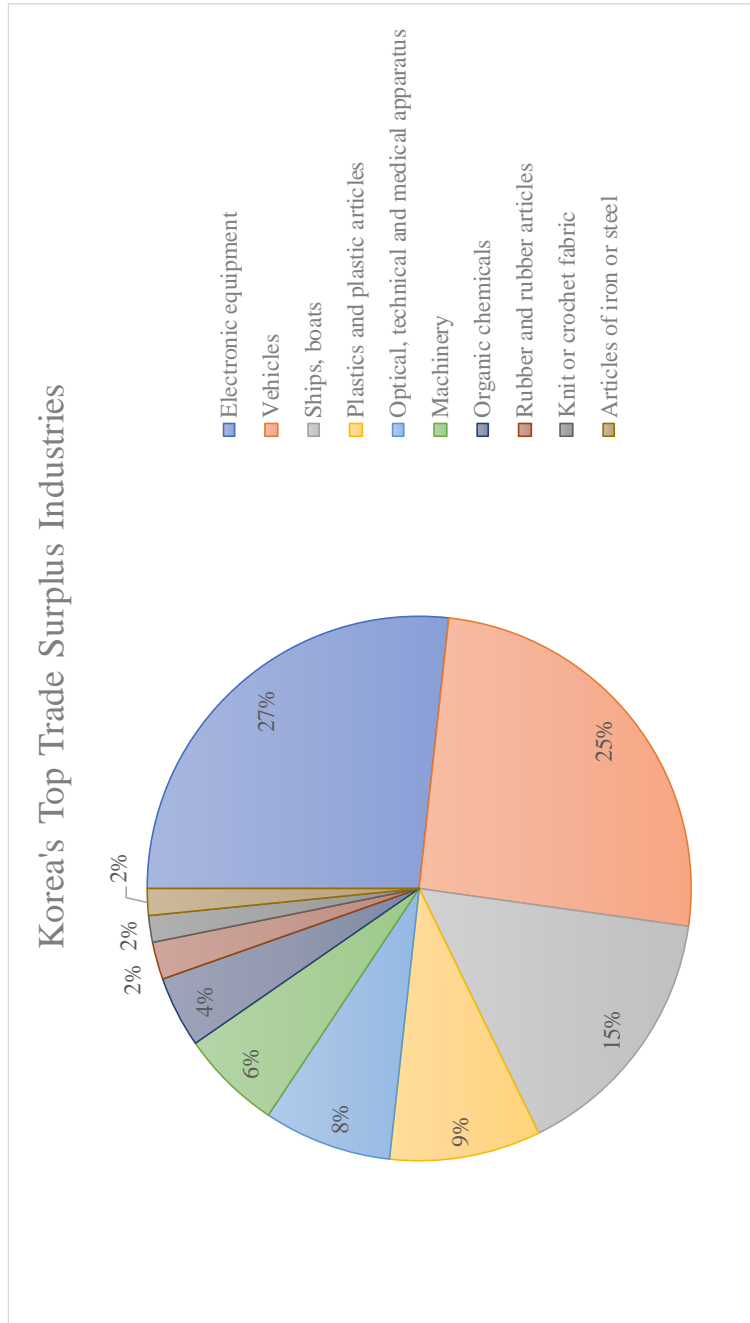
Data Source: Korea Listed Companies Association (KLCA), 2009-2016

[Figure 2: Increase in the Ratio of Outside Directors to Board Size]



Data Source: Korea Listed Companies Association (KLCA), 2000-2012

[Figure 3: Trade Surplus Industries of Korea]



Data Source: Observatory of Economic Complexity (OEC), 2016



[Table 1: Demands by IMF and Enforcement of Government]

Demands by IMF	Enforcement of Government
<b>Restructuring of Banks</b>	<ul style="list-style-type: none"> <li>● Capital reduction and privatization for Seoul First Bank</li> <li>● Improvements of management for 12 banks with BIS ratio below 8%</li> <li>● Cease of operations and revocation of licenses for incompetent financial firms</li> </ul>
<b>Strengthening of Financial Supervision</b>	<ul style="list-style-type: none"> <li>● Establishments and revisions of financial reform laws</li> <li>● Unification of financial supervisory system</li> </ul>
<b>Strengthening of Accounting Principles</b>	<ul style="list-style-type: none"> <li>● Unrealized loss of securities reflected 100% on the B/S</li> <li>● Reserve for credit loss reflected 100% on the B/S</li> </ul>
<b>Globalization of Financial Industry</b>	<ul style="list-style-type: none"> <li>● Admission for banks and security firms to set up local subsidiaries</li> </ul>

Data Source: Lee et al. (2001), Kim (2007) and Min et al. (2007)

[Table 2: Variable Construction]

NAME	DESCRIPTION
<i>Governance Variables</i>	
<b>Outside directorship</b>	<b>Dummy variable; equal to 1 if the ratio of outside directors to board size is above the required minimum* and 0 if otherwise</b>
Institutional ownership	Percentage of firm ownership held by institutional investors
Foreign ownership	Percentage of firm ownership held by foreign investors
<i>Trade Variables</i>	
<b>Change in export tariffs on Korean goods to U.S.</b>	<b>Difference between the average pre-FTA export tariffs for each industry (KSIC 5-digit; 2009-2011) and zero</b>
Change in import tariffs on U.S. goods to Korea	Difference between the average pre-FTA import tariffs for each industry (HS 6-digit; 2009-2011) and zero
Pre-FTA export tariffs on Korean goods to U.S.	Average pre-FTA export tariffs on Korean goods to the U.S. (HS 6-digit; 2009-2011)
HHI	Herfindahl-Hirschman index (KSIC 5-digit)
<i>Firm Variables</i>	
<b>ROA</b>	<b>Ratio of earnings before interest, taxes, depreciation and amortization (EBITDA) to total assets</b>
Log of Tobin's q	Log of the ratio of total market value of firm (i.e. market value of common stock and book values of preferred stock and total liabilities) to the total asset value of firm (book value of total assets)
Stock returns	Average monthly returns for each fiscal year in the study period
Firm asset size (large or small)	Dummy variable; equal to 1 if the firm has an asset size that is greater than the median for firms within its industry (KSIC 2-digit) and 0 if otherwise
Log of firm size	Log of sales revenue

Log of firm age	Log of the number of years that firm has been listed
Firm productivity (high or low)	Dummy variable; equal to 1 if the firm's total factor productivity is greater than the median for firms within its industry (KSIC 2-digit) and 0 if otherwise
<i>Industry Variables</i>	
Industry average	Average ROA across all firms, excluding firm in question, in each industry (KSIC 5-digit)
Capital intensity (high or low)	Dummy variable; equal to 1 if the industry's net change in capital is higher than the sample median and 0 if otherwise
Industry competitiveness (high or low)	Dummy variable; equal to 1 if firm's five-digit KSIC industry import tariffs from U.S. were lower than its export tariffs to the U.S. prior to 2012

**[Table 3: The Interaction of Corporate Governance and Trade Liberalization]**

*Dependent variable: ROA*

	(1)	(2)	(3)	(4)	(5)	(6)
Outside directorship	0.0068** [0.0168]	0.0052** [0.0141]	0.0049** [0.0145]	0.0042** [0.0155]	0.0033* [0.0141]	0.0033* [0.0150]
Outside directorship * Change in export tariffs on Korean goods to U.S.			0.0253** [0.0235]	0.0261* [0.0211]	0.0395*** [0.0165]	0.0361** [0.0157]
Change in export tariffs on Korean goods to U.S.	0.1058** [0.0261]	0.1014** [0.0234]	0.0198 [0.0210]	0.1089 [0.0206]	0.1221 [0.0178]	0.1225 [0.0155]
Change in import tariffs on U.S. goods to Korea					0.0079* [0.0117]	0.0011* [0.0309]
Outside directorship * Change in import tariffs on Korean goods to U.S.						0.0068 [0.0428]
Firm asset size	0.1009*** [0.0067]	0.1023*** [0.0059]	0.1009*** [0.0067]	0.1021*** [0.0066]	0.1112*** [0.0059]	0.1112*** [0.0059]
Firm asset size squared	0.0083*** [0.0005]	0.0085*** [0.0005]	0.0085*** [0.0005]	0.0086*** [0.0005]	0.0085*** [0.0005]	0.0081*** [0.0005]
Log of firm age	0.0315*** [0.0056]	0.0205** [0.0101]	0.0318*** [0.0056]	0.0210** [0.0099]	0.0208** [0.0093]	0.0208** [0.0093]
Industry average	0.1351*** [0.0336]	0.1659*** [0.0324]	0.1355*** [0.0336]	0.1656*** [0.0321]	0.1351*** [0.0283]	0.1351*** [0.0280]
HHI <sub>t-1</sub>		0.0966*** [0.0265]		0.0979*** [0.0254]	0.0685*** [0.0254]	0.0685*** [0.0251]
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.6170	0.6170	0.6170	0.6350	0.6360	0.6360

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

[Table 4: Firm Heterogeneity]

<i>Dependent variable: ROA</i>	Smaller firms		Larger firms		Younger firms		Older firms		Lower-productivity firms		Higher-productivity firms	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Outside directorship	0.0006 [0.0077]	0.0029* [0.0129]	0.0021 [0.0069]	0.0038* [0.0130]	0.0021* [0.0113]	0.0055 [0.0070]						
Outside directorship * Change in export tariffs on Korean goods to U.S.	0.0175** [0.1735]	0.0818** [0.4357]	0.0080 [0.4047]	0.0515*** [0.2297]	0.0950** [0.3912]	0.0752** [0.1865]						
Change in export tariffs on Korean goods to U.S.	0.0852* [0.1649]	0.1034 [0.4185]	0.0627 [0.3986]	0.1212 [0.2597]	0.1568 [0.4254]	0.0743 [0.1696]						
Controls	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

[Table 5: Industry Heterogeneity]

*Dependent variable: ROA*

	Lower capital industries	Higher capital industries	Less competitive industries	More competitive industries
	(1)	(2)	(3)	(4)
Outside directorship	0.0035* [0.0157]	0.0027* [0.0072]	0.0048** [0.0070]	0.0037 [0.0089]
Outside directorship * Change in export tariffs on Korean goods to U.S.	0.0107*** [0.2188]	0.0429 [0.3525]	0.0661* [0.2329]	0.1231** [0.3068]
Change in export tariffs on Korean goods to U.S.	0.0441* [0.2364]	0.0295 [0.3467]	0.0223 [0.2184]	0.0411 [0.2892]
Controls	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**[Table 6: Alternative Measures of Corporate Governance]**

*Dependent variable: ROA*

	(1)	(2)
Institutional ownership	0.0040*** [0.0191]	
Institutional ownership * Change in export tariffs on Korean goods to U.S.	0.1574** [0.0952]	
Change in export tariffs on Korean goods to U.S.	0.1687 [0.0312]	
Foreign ownership		0.0021 [0.0599]
Foreign ownership * Change in export tariffs on Korean goods to U.S.		0.0143* [0.0554]
Change in export tariffs on Korean goods to U.S.		0.0823 [0.7126]
Controls	Yes	Yes
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

[Table 7: Alternative Measures of Firm Performance]

Panel A		Panel B	
<i>Dependent variable: Log of Tobin's q</i>		<i>Dependent variable: Stock Returns</i>	
	(1)	(1)	(2)
Outside directorship	0.0094*** [0.0067]	0.0019*** [0.0035]	0.0021*** [0.0036]
Outside directorship * Change in export tariffs on Korean goods to U.S.	0.0376** [0.0074]	0.0029** [0.0041]	
Change in export tariffs on Korean goods to U.S.	0.1166** [0.0300]	0.0028*** [0.0040]	0.0028*** [0.0040]
Controls	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Adjusted R-sq.	0.4120	0.4400	0.4970
*** p<0.01, ** p<0.05, * p<0.1		*** p<0.01, ** p<0.05, * p<0.1	



**[Table 8: Summary of Hypotheses]**

<b>HYPOTHESIS</b>	<b>RESULT</b>
<i>Hypothesis 1a: There is a positive association between corporate governance and firm performance.</i>	<b>Supported</b>
<i>Hypothesis 1b: There is a positive association between an increase in trade opportunities and firm performance.</i>	<b>Supported</b>
<i>Hypothesis 1c: Firms with better corporate governance have a stronger positive association between trade opportunities and firm performance than firms with worse corporate governance.</i>	<b>Supported</b>
<i>Hypothesis 2: Firms with better corporate governance have a weaker negative association between foreign competition and firm performance than firms with worse corporate governance.</i>	<b>Not Supported</b>
<i>Hypothesis 3a: Larger and older firms will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than smaller and younger firms.</i>	<b>Supported</b>
<i>Hypothesis 3b: Firms that are more productive will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than less productive firms.</i>	<b>Supported</b>
<i>Hypothesis 4: Firms in industries with greater dependence on external finance will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than firms in industries that with less dependence on external finance.</i>	<b>Partially Supported</b>
<i>Hypothesis 5: Firms in industries that are more competitive relative to their counterparts in the U.S. will have a stronger positive association between the interaction of corporate governance and trade opportunities and firm performance than firms in industries that are less competitive relative to their counterparts in the U.S.</i>	<b>Supported</b>

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## 국문 초록

본 연구는 기업지배구조와 무역 자유화의 상호작용 효과가 기업 성과에 미치는 영향을 실증적 분석으로 검증하는 것을 궁극적인 목표로 한다. 요 근래 수십 년간 세계무역의 증가율이 세계GDP의 증가율을 앞지르면서 무역 자유화가 시장구조에 미치는 영향에 대한 관심이 급증하고 있다. 무역장벽이 제거 되면 기업은 더욱 치열한 시장 경쟁을 직면하게 되지만 동시에 무역 자유화를 통해 국가 간의 장벽이 낮아지면 기업은 새로운 성장 기회를 누리게 된다. 본 논문에서는 기업이 이러한 새로운 성장 기회를 최대한 활용할 수 있게 하는 여러 요인 중에서 기업지배구조의 영향을 제시하고자 한다. 이를 보이기 위해 본 연구는 코스피·코스닥 상장 기업 데이터를 면밀히 검토한다. 우선, 2012년 한-미 FTA의 발효로 FTA 전후 관세율의 변화를 외재적 변수로 활용하여 ‘트레이드 쇼크’ (trade shock)가 기업 성과에 미치는 영향을 살펴볼 수 있는 유사 실험 상황이 만들어 졌다. 또한 한국이 1997 IMF 사태 후에 법적으로 도입한 사외이사제도를 활용하여 각 기업의 사외이사 선임율을 이용하여 기업지배구조 변수를 간편하게 가변수로 코딩할 수 있고, 이 역시 기업 성과에 미치는 효과를 분석 할 수 있다. 기업 데이터를 활용해서 두 변수의 상호작용 효과를 계량 경제 모델로 분석하고 기업특징 및 산업특징 관련 통제 변수와 함께 분석한 결과, 기업지배구조가 우수한 기업들이 무역 자유화로 인해 생성되는 성장 기회를 보다 더 잘 활용 하는 것을 보인다. 본 논문을 통해 무역 자유화 이후 기업 성과에 영향을 미치는 기업지배구조의 역할에 대한 새로운 시점을 제시할 수 있다.

**주요어 :** 기업지배구조, 자유 무역화, 트레이드 쇼크, 기업 성과, 한국 기업  
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